



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,754	06/23/2003	Jack Wilbur Baldwin	I3DVI3367-2	9506

6111 7590 07/15/2004

GENERAL ELECTRIC COMPANY
ANDREW C HESS
GE AIRCRAFT ENGINES
ONE NEUMANN WAY M/D H17
CINCINNATI, OH 452156301

EXAMINER

PIZIALI, ANDREW T

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/601,754	BALDWIN ET AL.	
	Examiner	Art Unit	
	Andrew T Piziali	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/23/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second reinforcing pins each comprising a bundle of rods must be shown or the feature canceled from the claims. No new matter should be entered.
2. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informality: The status of nonprovisional parent application (whether patented or abandoned) should be included. If the parent application has become a patent, the expression “now Patent No. _____” should follow

Art Unit: 1771

the filing date of the parent application. If a parent application has become abandoned, the expression "now abandoned" should follow the filing date of the parent application.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The applicant has amended original claim 8 such that the reinforcing members comprise "a bundle of rods." The original specification discloses that the reinforcing member may be a single rod or fiber or a bundle of fibers, sometimes referred to as filaments (see [0019] and original claims 5-6 and 10), but the specification does not mention "a bundle of rods." Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1771

7. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3,834,832 to Mallinder et al. (hereinafter referred to as Mallinder) in view of USPN 4,622,254 to Nishimura et al. (hereinafter referred to as Nishimura).

Mallinder discloses a fiber reinforced composite article, such as an airfoil for a gas turbine engine member, comprising a plurality of stacked layers of aligned carbon fibers, a plurality of unconnected spaced apart fastening means, such as stitches of glass or carbon fibers or metal pins for fastening the layers together, wherein the fastening means also reinforces the composite and extends through the layers, wherein each fiber layer is impregnated with a resin (see entire document including column 1, lines 1-58, column 2, lines 18-20, and claim 1).

Mallinder does not mention the use of a bundles of rods, but Nishimura teaches making a fiber reinforced composite by stacking a plurality of layers of glass or carbon fibers and then stitching the layers together with a yarn of glass or carbon fibers (see entire document including column 4, lines 19-44, column 5, lines 32-38, and column 6, lines 20-25). The yarn of Nishimura is a bundle of rods. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the fastening means of Mallinder from any suitable fastening material, such as a bundle of rods, as taught by Nishimura, with the expectation of providing the desired fiber layer stitching and bonding and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

8. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,733,404 to Freitas et al. (hereinafter referred to as Freitas) in view of USPN 4,622,254 to Nishimura.

Regarding claims 8-10, Freitas discloses a fiber reinforced composite article comprising a plurality of stacked layers of first reinforcing fibers comprising a stack of layers and a plurality of unconnected spaced apart second reinforcing pins disposed into the article at an angle to the stack of layers wherein the second reinforcing pins are disposed beside the first reinforcing fibers and a substantially solid matrix is disposed about the first reinforcing fibers and the second reinforcing members (see entire document including Figures 1-4 and column 5, lines 8-55).

Freitas does not mention the use of a bundles of rods, but Nishimura teaches making a fiber reinforced composite by stacking a plurality of layers of glass or carbon fibers and then stitching the layers together with a yarn of glass or carbon fibers (see entire document including column 4, lines 19-44, column 5, lines 32-38, and column 6, lines 20-25). The yarn of Nishimura is a bundle of rods. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the reinforcing pins of Freitas from any suitable fastening material, such as a bundle of rods, as taught by Nishimura, with the expectation of providing the desired fiber layer stitching and bonding and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 9, Freitas discloses that the first reinforcing fibers and the second reinforcing pins may comprise at least one material selected from the group consisting of carbon, graphite, glass, and metal (column 3, lines 36-67, column 4, lines 1-14, and column 5, lines 56-65).

Regarding claim 10, Freitas discloses that the article may be used in aerospace applications (column 1, lines 17-22) such as an airfoil (Figures 10-16), wherein the first

Art Unit: 1771

reinforcing fibers in a layer are substantially aligned with one another (see Figures and column 5, lines 43-55).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (571) 272-1541.


The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

atp

 6/16/04
ANDREW T. PIZIALI
PATENT EXAMINER


TERREL MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700